

ABSTRACT OF THE DISCLOSURE

The invention relates to a biochip support comprising a substrate supporting at least one porous layer of material on a first face, the said layer being designed to fix biological molecules onto the said layer and in the volume of this layer, the said support being characterised in that the said layer is a thin optical layer of material prepared by the sol-gel method and for which the refraction index is less than the refraction index of the substrate.

The invention also relates to a process grafting of biological molecules onto and into the thin layer of material prepared by the sol-gel method on the first face of the biochip support. This process comprises the following steps:

- a sol is prepared that will provide the sol-gel material,
- biomolecules are incorporated into the material during its preparation,
- biomolecules are grafted into the material during its preparation,
- a thin layer of the said sol is deposited on the first face of the substrate,
- the thin layer of sol-gel material is obtained starting from the thin layer of sol.

Finally, one particular embodiment of the grafting process also comprises a structuring step of the thin layer of sol-gel material to obtain a network of pads or wells over all or part of the biochip support.

No Figure.